



Histamine Intolerance – new knowledge, new therapy!

Histamine-intolerance - different than expected

The treatment of histamine intolerance (HIT) is often thought to involve prescribing a histidine- and amine-low diet and administering the histamine-degrading enzyme DAO*. However, practical experience shows: unfortunately, that's not enough. Many HIT patients still show symptoms. This is because HIT is more complex than previously thought. The causes are far more than just food and a blocked enzyme (see below)! Histamine is produced and needed by the body as a tissue hormone and neurotransmitter. The term "histamine intolerance" is therefore misleading, because histamine as a natural substance does not cause intolerance. A better term would be histamine hypersensitivity (HHS).

HHS and Receptors

The body has four types of histamine receptors: H1 to H4. When histamine binds to them, it triggers many different and sometimes opposing effects. This explains the wide variability of symptoms in histamine-related issues.

Examples of symptoms are: H1: pro-inflammatory, triggers vomiting. H2: anti-inflammatory, increases stomach acid production. H3: reduces acetylcholine effects. H4: enhances acetylcholine effects. This list is not complete¹.

Studies show increased levels of H1 and H2 receptors in patients with irritable bowel syndrome, often more H1 than H2. This imbalance may contribute to the pro-inflammatory state typical of the syndrome². All of this makes it clear how complex the situation with histamine is, and that it's not just the amount of histamine in the gut that determines whether symptoms develop or not.

HHS, DAO and HNMT

Histamine is enzymatically broken down by the body: intracellularly by HNMT*, extracellularly by DAO*, responsible for histamine breakdown in the gut. Other amines and alcohol inhibit enzymatic breakdown and worsen symptoms in HHS. Certain medications also inhibit DAO, such as: NAC, aspirin (ASS), diazepam, metamizole and prilocaine. Nutrient deficiencies can also impair DAO function. The body needs: copper (Cu), zinc (Zn), manganese (Mn), vitamin C, vitamin B6.

Thus, it's important to consider diet (histamine sources and inhibitors) and nutrients, and possibly administer DAO. But this is only the symptom-oriented part of therapy. To sustainably address the causes of HHS, additional factors beyond receptors must be considered and treated.

Literature

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HHS and the Microbiome

Surprising insights into HHS come from the individual intestinal microbiome. Over 100 bacterial species in the gut microbiome can produce histamine³.

Whether they do depends on the gut environment, e.g., pH level. Most gut bacteria produce more histamine in acidic conditions⁴.

Meal nutrient composition also matters. Evidence suggests that low glucose and amino acid supply can increase bacterial amine production⁵. A low-carb, high-protein diet may worsen HHS.

On the other hand, certain lactic acid bacteria strains can inhibit amine production in the gut—again, depending on the gut environment^{6, 7}.

HHS and Inflammation

Gut issues like diarrhea, constipation, and IBS—as well as asthma, allergies, and eczema—are often associated with unfavorable microbiome changes^{8,9}. These are accompanied by chronic irritation and inflammation. If untreated, the intestinal mucosa degenerates, impairing its function.

Increased histamine production by the microbiome and reduced DAO secretion in the damaged gut pave the way for HHS. Contrary to previous assumptions, it's not HHS that causes inflammation, but inflammation that causes HHS.

HHS and the right therapy

The right HHS therapy depends on the individual microbiome. A targeted diagnostic approach is a microbiome analysis, which identifies the specific dysbiosis present.

Based on the results, practitioners can prescribe a personalized preparation via the Microbiome Center platform: MyOwnBlend. A pharmacy then produces and sends it to the patient—with the right bacterial strains, phytotherapeutics, nutrients, etc. This targeted microbiome treatment positively alters gut ecology, reducing pathogenic and histamine-producing bacteria. It also creates a better gut environment that limits histamine production, reduces inflammation, and helps optimize DAO function.

With this personalized therapy, a sustainable solution to HHS can be achieved.

MyOwnBlend – because every Microbiome is unique



More information

Scan this QR code to learn more about the Microbiome Center.